

# Pale Ale

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- Gravity **11.9 BLG**
- ABV **4.8 %**
- IBU **30**
- SRM **4.1**

## Batch size

- Expected quantity of finished beer **20 liter(s)**
- Trub loss **5 %**
- Size with trub loss **21 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **25.3 liter(s)**

## Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **12 liter(s)**
- Total mash volume **16 liter(s)**

## Steps

- Temp **68 C**, Time **70 min**
- Temp **78 C**, Time **10 min**

## Mash step by step

- Heat up **12 liter(s)** of strike water to **76C**
- Add grains
- Keep mash **70 min** at **68C**
- Keep mash **10 min** at **78C**
- Sparge using **17.3 liter(s)** of **76C** water or to achieve **25.3 liter(s)** of wort

## Fermentables

Type	Name	Amount	Yield	EBC
Grain	Viking Pale Ale malt	3.2 kg (80%)	100 %	5
Grain	Monachijski	0.6 kg (15%)	80 %	16
Grain	Bestmalz Carmel Pils	0.2 kg (5%)	75 %	5

## Hops

Use for	Name	Amount	Time	Alpha acid
Boil	Phoenix	30 g	0 min	11 %
Boil	Progress	40 g	50 min	5.5 %
Boil	Warrior queen	10 g	50 min	6.2 %

## Yeasts

Name	Type	Form	Amount	Laboratory
Safale US-05	Ale	Dry	11.5 g	---

## Extras

Type	Name	Amount	Use for	Time
Herb	mech irlandzki	5 g	Boil	50 min

## Notes

- Wysładzać 15l wody w temp.80C

*Jan 16, 2020, 3:09 PM*